

Certain embodiments relate to a method for calibrating an imaging system having an array of detector elements arranged with respect to a reference position and having an energy source moving in a pattern to irradiate the array of detector elements. The method includes initiating estimated detector positions for the array of detector elements and an estimated motion pattern for the energy source defined with respect to a reference position. The method also includes scanning a phantom having pins located at positions in the phantom. The method further includes calculating estimated pin positions, with respect to the reference position, based on at least one of the estimated detector positions and motion pattern and modifying at least one of the estimated detector positions and pin positions based on at least two of the estimated detector positions, motion pattern and pin positions. The method also includes determining variation in the motion pattern based on at least one of the estimated detector positions and pin positions and adjusting the motion pattern for the energy source based on the variation.

Figures